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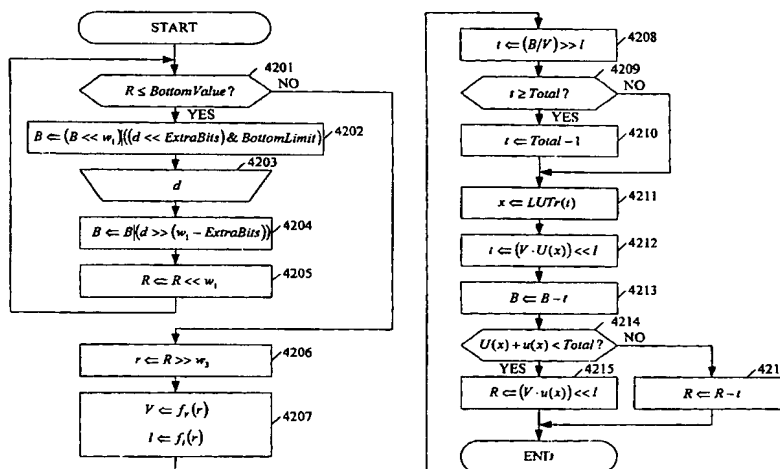
- as to the identity of the inventor (Rule 4.17(i)) for all designations
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(54) Title: FAST CODEC WITH HIGH COMPRESSION RATIO AND MINIMUM REQUIRED RESOURCES



(57) Abstract: This invention provides a novel single-pass and multi-pass synchronized encoder and decoder, performing order(s) of magnitude faster data compression and decompression, at any compression ratio with the higher or the same perceived and measured decompressed image quality in comparison with the best state-of-the-art compression methods, using order(s) of magnitude less system resources (processor complexity, memory size, consumed power, bus bandwidth, data latency). These features are achieved using novel direct and inverse non-stationary filters for the recursive octave direct and inverse subband transformation, novel simple context modeling and symbol probability estimation using a minimum number of histograms with the fast adaptation for the sign and the magnitude of the transformation coefficients, a novel accelerated range coder without division operations, and a novel synchronisation of the compressed data.



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